

Date: Wed, 19 Oct 94 18:58:26 PDT  
From: Info-Hams Mailing List and Newsgroup <info-hams@ucsd.edu>  
Errors-To: Info-Hams-Errors@UCSD.Edu  
Reply-To: Info-Hams@UCSD.Edu  
Precedence: List  
Subject: Info-Hams Digest V94 #1135  
To: Info-Hams

Info-Hams Digest                      Wed, 19 Oct 94                      Volume 94 : Issue 1135

Today's Topics:

ARRL to change "Silent Keys" label in QST? (4 msgs)  
    Callsigns. (3 msgs)  
    Code debated 10/23/94  
    Deignan's List of Dead Hams, etc.  
    Kindness and ham radio  
low power fm short range xmitter (2 msgs)  
    Proximity Detector CKT  
re(2): Alpha Bravo Charlie Delta: phonetic alphabets (revised)  
    TS-120-s problems, help!  
    Which is harder ADVANCED OR EXTRA TEST  
    Which is harder ADVANCED OR EXTRA TEST?

Send Replies or notes for publication to: <Info-Hams@UCSD.Edu>  
Send subscription requests to: <Info-Hams-REQUEST@UCSD.Edu>  
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Info-Hams Digest are available  
(by FTP only) from UCSD.Edu in directory "mailarchives/info-hams".

We trust that readers are intelligent enough to realize that all text  
herein consists of personal comments and does not represent the official  
policies or positions of any party. Your mileage may vary. So there.

-----  
Date: 19 Oct 1994 15:50:09 GMT  
From: md@pstc3.pstc.brown.edu (Michael P. Deignan)  
Subject: ARRL to change "Silent Keys" label in QST?

In article <3839nf\$1sou@yuma.ACNS.ColoState.EDU>,  
galen@picea.CFNR.ColoState.EDU (Galen Watts) writes:

|> Well, considering that most CW ops also don't use a key, maybe QST should  
|> change the name to:  
|>  
|>                      DEAD BUGS

Good one, Galen. You had me laughing so hard my sides hurt. I'm glad a few people out there can still appreciate sarcastic humour when they see it.

MD

-----  
Date: 19 Oct 1994 16:44:15 GMT  
From: mconner@rain.atms.purdue.edu (Mark D. Conner)  
Subject: ARRL to change "Silent Keys" label in QST?

In article <38158q\$9rv@cat.cis.Brown.EDU> md@pstc3.pstc.brown.edu (Michael P. Deignan) writes:

>With the popularity of the no-code license, its only a matter  
>of time, if it hasn't occurred already, that a no-code tech will  
>die and have his/her call listed in the QST "Silent Keys" column.

>

>Clearly, we need some "Truth in Advertising". These hams can't be  
>silent "keys", because most of them were probably too lazy to touch  
>a key (or even know what a key is, for that matter...).

Oh, good, at long last, a fresh line of argument - "if you don't beep, you ain't squat". I really love it when someone comes up with something new in this newsgroup.

The next time I help with traffic control at a local event I'll bring a bench and straight key with me. If God wanted me to beep all the time, He'd have given me a modem and bug in place of a voice box.

Guess I'll have to invest in the disk space for those killfile directories after all. Congratulations, Mr Deignan, those stink bombs you throw actually have an effect.

For the record, code users definitely have a place in Amateur Radio, but that place is not to tell the non-code-users they're lazy or "not real hams".

--

Mark D. Conner - N9XTN                      Opinions expressed here are  
Dept. of Earth & Atmospheric Sciences not necessarily those of the  
Purdue Univ., W. Lafayette IN 47907      Government, DoD, Purdue, or  
mconner@rain.atms.purdue.edu              the author.

-----  
Date: 19 Oct 1994 17:00:44 GMT  
From: little@iamu.chi.dec.com (Todd Little)  
Subject: ARRL to change "Silent Keys" label in QST?

Please take your anti-no-code diatribe and bigotry to a newsgroup that is more appropriate and leave r.r.a.m. alone.

Thanks,  
Todd  
N9MWB

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Date: Wed, 19 Oct 1994 13:17:03 -500 CDT  
From: pwalker@mbi.moody.edu (Paul D. Walker II)  
Subject: ARRL to change "Silent Keys" label in QST?

In article <38158q\$9rv@cat.cis.Brown.EDU> md@pstc3.pstc.brown.edu (Michael P. Deignan) writes:

>With the popularity of the no-code license, its only a matter  
>of time, if it hasn't occurred already, that a no-code tech will  
>die and have his/her call listed in the QST "Silent Keys" column.

>  
>Clearly, we need some "Truth in Advertising". These hams can't be  
>silent "keys", because most of them were probably too lazy to touch  
>a key (or even know what a key is, for that matter...).

Didn't anybody else see this for what it was --- HUMOR. Good grief, lifes too short to get uptight over everything someone says. Life's also too short to wait for the rules to change. This ex-no-code Tech now holds an extra class ticket.

Have a nice day! :-)  
Paul Walker  
N9WHG  
pwalker@mbi.moody.edu

-----  
Date: Wed, 19 Oct 1994 15:26:06 GMT  
From: weltyrc@mail.auburn.edu (Ryan C. Welty)  
Subject: Callsigns.

Brad Killebrew N5LJV (n5ljv@uh.edu) wrote:

: The following comments DO NOT reflect the ham population in general,  
: rather just one individual that have the unfortunate luck of knowing.

: This particular fellow is a no-code Tech who is still an avid CB'er.  
: His "CB" rig is a modified Uniden 10 meter radio with a 500 watt amp.  
: While this person loves to operate VHF and UHF repeaters, he also enjoys,  
: rather frequently, moving his "CB" rig into the ham band and shooting DX.

Turn this person in to an Official Observer, or to the FCC. Other nifty ideas include a pin thru his coax.

It would be simple if everyone's call reflected their license class, and thats how it once was. But think about it for a minute. I know lots of old timers who are generals or advanced but have 2x3 calls. And extras with 1x3s. I'm working on my extra code now, but I don't want a ad4?? call when I get it. I want to keep mine until they do the requested call sign thing.

If you have a doubt about someone's license class, just telnet buffalo and look them up. I'm sure it will diferentiate between coded and code-free techs within a year or two.

my \$0.02  
ryan kr4oq

--

```
=====
| Ryan Welty                H: 821.7458 W: 844.4059 | It is a wonderful,      |
| Chief Engineer           kr4oq@bbs.k4ry.#cenal.al.usa | powerful place...      |
| WEGL FM91.1              weltyrc@mail.auburn.edu   | where there is faith.  |
=====
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Date: Wed, 19 Oct 1994 15:57:28 GMT  
From: phb@syseng1.melpar.esys.com (Paul H. Bock)  
Subject: Callsigns.

zlau@arrl.org (Zack Lau (KH6CP)) writes:

>Brad Killebrew N5LJV (n5ljv@uh.edu) wrote:

>: Now that the FCC has their new computer online, the FCC should program  
>: their computer to issue DIFFERENT class callsigns to EACH license class.  
>: I believe that if this particular ham that I mentioned above would have  
>: a class-distinctive callsign, other hams would know that he is not  
>: authorized on those frequencies. This problem is also compounded because  
>: in most call districts, Technicians and Generals are assigned Novice calls  
>: because 1x3 N-calls are gone.

This would mean \*requiring\* people to accept a new callign each time they upgrade, which is a \*disincentive\* to upgrading. Having had the same callsign since 1957, I'm particularly fond of it, and as I approach retirement I may find the time to upgrade to Extra. However, I'm not willing to relinquish a long-held callsign to do that without some serious thought beforehand; i.e., how badly do I really want that bottom 25 kHz just to

work CW DX?

>While there are exceptions, how many exotic DX stations keep up with  
>the way the FCC allocates callsigns in the USA. Or to put it another  
>way, how many USA amateurs can detail how Australia or the UK allocates  
>their callsigns?

Excellent point. And why should they? That's a regulatory issue within each country. If the 00s were given on-line access to the FCC database (via Telnet or some such) then they could quickly ID an "out-of-bander." But \*no\* system will accomplish foolproof IDing of privileges unless prefixes are made \*very\* distinctive and \*everyone\* gets a new license and callsign; i.e., start over again from scratch. All Novices start with N or N(\*), all no-code techs with AA thru AK, code techs with AL thru AZ, all generals with K or K(\*), all advanced with W(\*), all extras with W. Every time you upgrade, you get a new call. Big Brother now has total control.....

(|\_|) Paul H. Bock, Jr. K4MSG      Internet: pbock@melpar.esys.com  
| |) Principal Systems Engineer   Telephone: (703) 560-5000 x2062

"You can have my bug when you can pry my cold, dead fingers from around it....." - anonymous radiotelegraph operator

-----  
Date: 19 Oct 1994 16:27:44 GMT  
From: mconner@rain.atms.purdue.edu (Mark D. Conner)  
Subject: Callsigns.

In article <18OCT199413225024@elroy.uh.edu> n5ljv@uh.edu (Brad Killebrew N5LJV) writes:

>Here's the topic:

>

>Now that the FCC has their new computer online, the FCC should program  
>their computer to issue DIFFERENT class callsigns to EACH license class.  
>I believe that if this particular ham that I mentioned above would have  
>a class-distinctive callsign, other hams would know that he is not  
>authorized on those frequencies. This problem is also compounded because  
>in most call districts, Technicians and Generals are assigned Novice calls  
>because 1x3 N-calls are gone.

Would this be retroactive to all current license holders? I don't think a mass reissue of calls will be popular with anyone, especially the FCC.

Second, will you be \*required\* to change your call when you upgrade?

This probably won't go over well, either. If a person stays a while in one class and has a well-known call, he won't want to lose it.

If license class is known from the callsign alone, poor operators will likely "appropriate" a call from the desired class and use it instead. There are enough callbooks and callsign servers around that if there is a question on whether someone is operating in the appropriate band, he/she can be checked out rather quickly.

--

Mark D. Conner - N9XTN                      Opinions expressed here are  
Dept. of Earth & Atmospheric Sciences not necessarily those of the  
Purdue Univ., W. Lafayette IN 47907      Government, DoD, Purdue, or  
mconner@rain.atms.purdue.edu              the author.

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Date: Wed, 19 Oct 1994 14:54:12 GMT  
From: lenwink@indirect.com (Len Winkler)  
Subject: Code debated 10/23/94

10/23/94 is this Sunday and that means Paul Flaherty & Dana Meyers; 2 of the famous code debaters will appear on the nationally syndicated talk show, Ham Radio & More.

The 2 have been going at it for almost 10 years now. Will it be settled this Sunday?

It will be a great chance to HEAR what they have to say, call in and ask them questions, praise them, flame them, or whatever. That's 10/23/94, at 6:00pm EST on the Ham Radio & More show, on the Talk America Network. Also via satellite on Spacenet 3, Transponder 9, 6.8 audio. Call 602-241-1510 for more info.

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Date: 19 Oct 1994 19:27:59 GMT  
From: Tony\_Pelliccio@brown.edu (Tony Pelliccio)  
Subject: Deignan's List of Dead Hams, etc.

In article <3837hc\$3sp@cville-srv.wam.umd.edu>, ham@wam.umd.edu (Scott Richard Rosenfeld) wrote:

> Besides being in somewhat poor taste and insulting to no-code  
> tech licensees (which we've come to expect from Mr. D.), Mike  
> may actually have a point about renaming the "Silent Keys"  
> column. Some other ideas:  
>  
> Eternal QRT  
> Permanent QSB

> Gone to that great DX contest in the sky  
>  
> Hmmm, given these choices, I think "Silent Keys" is a pretty  
> good name for the column.

Deignan isn't the only one who feels that way. I live not a mile from him and hear the same psychobabble on 2m and 70cm. It's a way of life for most Rhode Islanders which is most unfortunate.

It's amusing when some tropo occurs and all the no-clue's clamor over each other for that "rare DX" contact.

I don't mind a no-code who doesn't complain/whine/bitch about HF access and who doesn't act like a complete fool when tropo occurs. A 2m repeater isn't the place for it.

--  
== Tony Pelliccio, KD1NR - Brown University ADIR Computing Services  
== Box 1908, Prov, RI 02912 Tel. (401) 863-1880 Fax. (401) 863-2269  
== Organized Crime is alive and well. It's called Auto Insurance.

-----  
Date: 19 Oct 1994 18:50:29 GMT  
From: myers@Cypress.West.Sun.Com (Dana Myers)  
Subject: Kindness and ham radio

In article 11823@ke4zv.atl.ga.us, gary@ke4zv.atl.ga.us (Gary Coffman) writes:  
>In article <782497263snz@g4kfk.demon.co.uk> Mike@g4kfk.demon.co.uk writes:  
>>  
>>A special LID of the year award to Monique, F1\*\*\* Monique, if you're  
>>reading this, did it occur to you to actually listen on the input for  
>>all those rare DX stations that you thought you were working?  
>  
>Excuse me, but operating simplex on a repeater input is very bad  
>form indeed. Our FCC would consider it malicious interference if  
>it were done deliberately.

Well, Gary, I frequently \*listen\* on input, as Mike mentions, to see if I am in simplex range of a station I'm talking to via a repeater. If we are in simplex range, then I'll, using the repeater, agree on a frequency and move. Nothing malicious about that.

---  
\* Dana H. Myers KK6JQ, DoD#: j | Views expressed here are \*  
\* (310) 348-6043 | mine and do not necessarily \*  
\* Dana.Myers@West.Sun.Com | reflect those of my employer \*  
\* "Antenna waves be burnin' up my radio" -- ZZ Top \*

-----  
Date: 19 Oct 1994 17:31:07 GMT  
From: moritz@ipers1.e-technik.uni-stuttgart.de ()  
Subject: low power fm short range xmitter

In article <38241q\$h3b@ixnews1.ix.netcom.com>,  
Jim Blake <jim\_b@ix.netcom.com> wrote:  
>Hi.

>  
>I am interested in information on short range fm transmitters.

To my knowledge your desire is downright illegal.  
try rec.radio.criminal!

-----  
Date: 19 Oct 1994 18:37:40 GMT  
From: galen@picea.CNR.ColoState.EDU (Galen Watts)  
Subject: low power fm short range xmitter

In article <38314r\$o3j@info2.rus.uni-stuttgart.de> moritz@ipers1.e-technik.uni-stuttgart.de () writes:

>In article <38241q\$h3b@ixnews1.ix.netcom.com>,  
>Jim Blake <jim\_b@ix.netcom.com> wrote:  
>>I am interested in information on short range fm transmitters.

>  
>To my knowledge your desire is downright illegal.

Only if he violates FCC Part 15 regs.

>try rec.radio.criminal!

Nahhhh, try alt.radio.pirate  
Folks on a.r.pirate are pushing the legal issue of freedom of speech and  
how microbroadcasting is the 20th century equiv. of Ben Franklin's  
'Poor Richards Almanac'. Interesting discussion.

Galen, KF0YJ

-----  
Date: 19 Oct 94 20:41:00 GMT  
From: HWellls.El\_Segundo@xerox.COM  
Subject: Proximity Detector CKT

Hi gang,

Although I'm familiar with the older forms of proximity detection, I'm curious about by the system used currently on cars that provide an audible warning. Are there any circuit diagrams available or can someone provide me with a technical explanation of the detector circuit?

Will certainly appreciate any help or clues that you are able to provide.

Thanks and 73

Hugh Wells, W6WTU  
Hugh\_E.\_Wells.El\_Segundo@xerox:com

-----  
Date: 19 Oct 1994 19:34:49 GMT  
From: wjturner@iastate.edu (William J Turner)  
Subject: re(2): Alpha Bravo Charlie Delta: phonetic alphabets (revised)

In article <jyoungberg.13.000D1FED@draper.com> jyoungberg@draper.com (James W. Youngberg) writes:

>Actually, I don't recall the use of LLAMA. No word started with the same  
>sound that its first letter would indicate. Truly inspirational.

If you pronounce LLAMA like the Spanish, it doesn't have an L sound...

Just a thought...

-----  
Date: Wed, 19 Oct 1994 19:40:32 -0400  
From: frederick.mckenzie-1@pp.ksc.nasa.gov (Fred McKenzie)  
Subject: TS-120-s problems, help!

In article <382khi\$o27@kaiwan009.kaiwan.com>, pablotwa@kaiwan.com (Pablo Lewin) wrote:

> I recently purchased a TS-120-S hf xceiver, and it seems to work well on  
> 80 and 40 meters, however on 20,15, and 10 meters, it is extremely  
> unreliable, iat times the xceiver seems to go into an autoscillation mode  
> where the carrier goes bezerk ( out of control!) and there's no  
> modulation posibbleches,.

Pablo-

Yours is a common problem with the TS-120S. Not only are there components that can cause it, I heard there was a factory bulletin that covers it.

Early reports were that you needed to go to the PCBs and install star lock

washers under all the screws holding them down, to provide good ground connections. I discussed this with a technician at Amateur Electronic Supply, who said that it shouldn't oscillate, even with the screws removed! He successfully repaired mine by replacing one failed component. As I recall, he claimed mine already had the Kenwood mod incorporated.

First thing you can try, is to tighten all the PCB mounting screws, and see if that helps. Then, contact Kenwood about the service bulletins for that problem. You may have to send it back to Kenwood.

If it wasn't for this problem, the TS-120S is a fine little radio. Its only other drawback is a slight drift in the VFO. In general, you can depend on the digital display once you've calibrated it. But, be aware that the VFO drifts 100 Hz before the next digit changes on the display. It should be calibrated so that the digit just changes from 14.999.9 to .000.0, when you get the same tone on upper and lower sideband, on 15 MHz WWV. (Does that make sense?) In case you didn't notice, there is a rubber plug on the left side of the radio, that covers the calibration adjustment hole.

73, Fred, K4DII

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Date: 19 Oct 1994 19:08:22 GMT  
From: myers@Cypress.West.Sun.Com (Dana Myers)  
Subject: Which is harder ADVANCED OR EXTRA TEST

In article AGv@world.std.com, jjmartin@world.std.com (James J Martin) writes:  
>Jeff Hall (szhall@chip.ucdavis.edu) wrote:

>: Whats your opinon? Is the written Advanced class or Extra class exam  
>: harder? I am just asking about the written test not the code..thanks..Jeff  
>

>Although I took the Advanced test at an FCC proctored session and the  
>Extra at a couple of ARRL sessions I'd say that the Advanced exam was  
>by far the more difficult of the two.

>  
>I took the Advanced exam, passed the second time, back in 1983. Didn't  
>do the Extra until 1990.

I'm like Jim; I passed Element 4(A) (Advanced written) in 1980, at the San Francisco FCC office. I passed 4(B) (Extra written) at a VE session in Lancaster in 1990. 4(B) was, for me, really easy. I just had to bone up on some arcane rules/regs. I have trouble remembering 4(A); I was 16 then, and I recall it was challenging. However, I haven't looked at the current question pools yet.

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\* Dana H. Myers KK6JQ, DoD#: j | Views expressed here are \*  
\* (310) 348-6043 | mine and do not necessarily \*  
\* Dana.Myers@West.Sun.Com | reflect those of my employer \*  
\* "Antenna waves be burnin' up my radio" -- ZZ Top \*

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Date: Wed, 19 Oct 1994 19:05:00 -0400  
From: frederick.mckenzie-1@pp.ksc.nasa.gov (Fred McKenzie)  
Subject: Which is harder ADVANCED OR EXTRA TEST?

In article <37uv1p\$gt5@mark.ucdavis.edu>, szhall@chip.ucdavis.edu (Jeff Hall) wrote:

> Whats your opinon? Is the written Advanced class or Extra class exam  
> harder? I am just asking about the written test not the code.

Jeff-

"Back in the good old days" - I took both tests in front of the FCC in one session. It was around 1973, and I was only about 3 years out of College (EE).

I found the Advanced material more superficial. I felt memorization would have been adequate to pass the test. On the other hand, It was a good thing I had been studying hard. The Extra test was quite rough, requiring a lot of thought. Lets see - if the Class C amplifier's base voltage is negative, is it an NPN or a PNP transistor?

How is it today? The best way to find out, is to just go ahead and give it a shot! Next best, is to find some of the tutorial computer programs. There are some that give you a simulated test, based on the official question pool. I've seen them for both Mac and MS-DOS, at various HAM ftp sites. Some of them are based on an older question pool, but they should still give you an idea of the test difficulty. The question pools can also be found at the same ftp sites.

73, Fred, K4DII

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Date: Wed, 19 Oct 1994 11:22:01 -500 CDT  
From: pwalker@mbi.moody.edu (Paul D. Walker II)

References<4480DXDOCTXSMANQPU@mcube.com> <CxwEKv.GCt@news.hawaii.edu>,  
<382v36\$5cq@info.census.gov>

Subject: Re: Give me your Definition of Ham Radio!!!

In article <382v36\$5cq@info.census.gov> kbarnes@info.census.gov (Kevin Barnes) writes:

```
>Wow, things must be a lot different in your part of the country. Here  
>in southern Indiana/northern Kentucky newcomers are welcomed with open  
~~~~~
```

Kevin,

Isn't southern Indiana ACTUALLY northern Kentucky? ;^)

73 de N9WHG  
Paul Walker  
pwalker@mbi.moody.edu

Date: 19 Oct 1994 20:09:53 GMT  
From: m-atkinson@nwu.edu (Michael A. Atkinson)

References<Cxt1FJ.Kpo@news.Hawaii.Edu> <Cxx7xr.M3q@freenet.carleton.ca>,  
<Cxxozw.AIH@news.hawaii.edu>  
Subject: Re: Earth Ground (was: ARRL And Gay Hams Settle Complaint)

Jeffrey Herman <jeffrey@kahuna.tmc.edu> wrote:

```
>Now, Dave said that he hoped hams would be more tolerant than the
>rest of society concerning the activites of gays. But why should
>society have to change their innate feelings to suit a mere 2% who
>choose to participate in these nauseating acts? Maybe that 2% should
>be more tolerant of our feelings.
```

EXCUSE me. There's a difference between "changing your innate feelings" and not beating up people.

Let me phrase that slightly differently. You have the right to be disgusted by whatever you want to be disgusted by. That does \*not\* mean that anybody, anywhere, should be discriminated against, beaten, hounded, harrassed or killed because of what they do behind closed doors with other consenting adults.

Your feelings and your words reflect poorly on yourself and on the Amateur Radio Service. If you want to be bigoted, I won't try to stop you. But, for everybody's sake, keep your ignorance and hatred to yourself. I'd hate to think that I'd lumped myself in with you when I took and passed my test.

By the way, while I don't have definitive numbers, I hear that about 10% of the US population is not-heterosexual.

Mike

--

Michael A. Atkinson  
m-atkinson@nwu.edu

Office of the Dean  
College of Arts and Sciences  
Northwestern University

-----  
Date: 19 Oct 1994 15:48:05 GMT  
From: richard.krum@msfc.nasa.gov (Richard M. Krum, KE4GNK)

References<1994Oct16.174029.26739@ke4zv.atl.ga.us>  
<vaughnwt.66.0015AA0D@olympus.net>, <kthompso.345.00099AD3@WichitaKS.NCR.COM>  
Subject: Re: Sound Operated Phones

In article <kthompso.345.00099AD3@WichitaKS.NCR.COM>, kthompso@WichitaKS.NCR.COM  
(Ken Thompson) says:

>  
>  
>  
>>And it might interest you to know that sound powered phones as they are  
>>referred to in the navy and coast guard are alive and well and used every day  
>>for intership communication.  
>        ^^^^  
>would that be intraship?  
>I think they use radio intership :-)  
>

Well, sorta. They are usually used for interior communications. The sound-powered phones are also used between ships that are doing underway resupply or refueling. There is a "messenger line" with distance markers and a phone wire strung between the ships before anything else is connected. The ends of the wire are connected to the sound-powered telephone circuit to the "bridge talker" on both ships. Apparently the Navy trusts the sound-powered stuff to work even if radios do fail. A "Breakaway" order from either "bridge talker" usually gets over faster than the radio chatter, and if the tactical situation requires radio silence----.

Was out there one dark and stormy night, when a destroyer was trying to refuel from our aircraft carrier. His props and rudder came out of the water on a particularly bad wave--instant outta control. The word to break away was given by the bridge talker on the can just before their captain realized what was about to happen, and gave the order on radio. We did it on first word anyway. Very hairy, trying to unhook

all that junk while dodging another ship

.

The kid got a commendation for thinking fast, and a (light) slap on the wrist for talking too fast. We darn near got a DLG stuck through the side of our ship. I was able to get a picture of the bow of the can coming outta the water, but I was too busy running for my life to get the rest of the story on film. The destroyer rolled toward us, surfed down the wave, and was UNDER our deck overhang when the wave rolled him out the other way. Too close.

--Rich, (No longer in THAT business, thank the ghods)

\*\*\*\*\*

Usual disclaimers for my casual, non-work-related opinions. I do not speak for CSC or NASA, even on a good day. Your mileage may vary wildly, mine does!

richard.krum@msfc.nasa.gov

10003 Dunbarton Drive

Computer Sciences Corporation

Huntsville, AL 35803

PO box 240005

Ham Radio: KE4GNK

Huntsville, AL 35824

147.240- or 146.520

simplex

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End of Info-Hams Digest V94 #1135

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